04-SM-101-PM 20.0/26.1
04-SM-280-PM 4.6
04-SM-35-PM 22.7/27.3
04-SM-380-PM 4.7/5.6
Program Code: 201.235
EA 3G680K
September 2011

Request Programming in 2012 SHOPP

PROJECT LOCATION: In San Mateo County on Various Routes at Various Locations

APPROVAL RECOMMENDED:

jeanne gorham 9-15-11
JEANNE GORHAM, DISTRICT PROGRAM MANAGER

APPROVAL RECOMMENDED:

LAWRENCE A. JONES, PROJECT MANAGER

APPROVED:

BIJAN SARTIPI, DISTRICT DIRECTOR — *DATE* 9-15-11

This project initiation document has been prepared under the direction of the following Registered Civil Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER — *DATE* 9/14/11

1. Initiating Office/Initiator:

The District 4 Program Manager for the Roadside Safety Improvement Program has established that a roadside safety project is needed on various routes and at various locations in San Mateo County that meets the qualification for the 201.235 Program.

This Small Capital Value Project (SCVP) project initiation document (PID) provides conceptual approval of the proposal and a recommendation to program the project into the 2012 State Highway Operation and Protection Program (SHOPP.) A project report will serve as final approval of the proposal.

2. Purpose and Need:

Purpose:

The purpose of the ROADSIDE SAFETY IMPROVEMENTS (201.235) Program is to minimize the frequency and duration of highway worker exposure to traffic by providing safe access to work areas and by providing features to reduce repetitive maintenance activities. The program originated as the result of annual Caltrans statewide stand-down meetings to improve safety for Caltrans employees as well as the travelling public.

The program provides off pavement access areas that can be used by highway workers for landscape, electrical, and roadway maintenance; litter pickup crews; the motoring public for emergencies; and the California Highway Patrol for traffic control. Safety improvement measures under this program also include relocating existing roadside facilities to safe work locations away from the travelled way; paving extended gore areas, narrow areas, and some slopes adjacent to bridge structures; providing vegetation control treatments under existing guardrail, in low visibility areas and along the road edge.

Need:

Installation of roadside safety improvements such as gore area paving, maintenance vehicle pullouts (MVPs,) and access gates, will decrease worker exposure. Currently, the maintenance of the unpaved gore areas must be performed manually requiring daytime lane closures exposing maintenance workers to high speed traffic on the heavily congested routes in the Bay Area. In areas lacking adequately located MVPs or access gates, often times maintenance vehicles are forced to use the shoulders or other less desirable area to park in order to be in the vicinity of the work.

The Department's Maintenance work force has declined in size over time and is likely to continue to decline due to State fiscal issues. With fewer maintenance staff and crews, the result is increasing responsibility for more lane miles and right of way acreage per person. In addition, the Department is shifting toward statewide reduction of herbicide applications, meaning that other measures are needed to control weeds and unwanted vegetation on the roadside and in the State Right of Way.

3. Deficiency Summary:

There are existing risks associated with worker exposure to traffic as determined by frequency and duration of exposure, variety of maintenance crews in area. These risks can be decreased with installation of roadside safety improvements.

4. Project Proposal:

District Maintenance has identified 8 locations containing unpaved areas beyond the gore as needing to be paved on Route 101, 280, 35 and 380 in San Mateo County within the project post-miles. Six maintenance vehicle pullouts (MVPs) and two access gates are proposed for Route 380. The project proposes to pave those unpaved areas to reduce vegetation maintenance and enable mechanical sweeping, thus decreasing worker exposure while increasing public safety. Since the hydrology will be affected by the paving, the need for drainage modifications will have to be addressed.

In the course of investigation during the PA&ED phase, there may other locations identified as needing gore paving, maintenance vehicle pullouts (MVPs) or access gates.

R/W: All construction work including traffic control operations is anticipated to be performed within the State Right of Way. A Right of Way data sheet will be included in PA&ED phase.

Hazardous Waste: Hazardous material investigation and recommendations will be performed during the PA&ED and PS&E phases.

Stormwater: This project has anticipated soil disturbance, temporary water quality impacts resulting from the construction activities in this project will be addressed at PA&ED phase. A Storm Water Data Report (SWDR) will be included in PA&ED phase.

Hydraulics: The existing water flow lines will be affected by the gore paving. District Hydraulics will need to investigate and provide recommendations for drainage modifications during the PA&ED and PS&E phases.

Environmental: This project is expected to have no economic, social or environmental impacts, and a Categorical Exemption is the anticipated environmental clearance document. Environmental analysis will performed during the PA&ED phase.

5. Programming

PROJECT CAPITAL COST		
Fiscal Year	**Right of Way Capital**	**Construction Capital**
FY14-15	$5,000	
FY15-16		$1,500,000

Key assumptions for the cost estimate:

- Excavated soil is ADL contaminated
- No annual escalation factor

	PROJECT SUPPORT COMPONENTS								
	PA&ED 0 Phase		**Design 1 Phase**		**Right of Way 2 Phase**		**Construction 3 Phase**		**Total**
	Dist	**DES**	**Dist**	**DES**	**Dist**	**DES**	**Dist**	**DES**	
Estimated PY's	0.6		0.8		0.2		1.2		2.8
Project Support in dollars ($K)	100		150		40		210		500

Key assumptions for support cost estimate:

- Support Cost 33% of Capital Cost
- $180,000 / PY

6. Schedule:

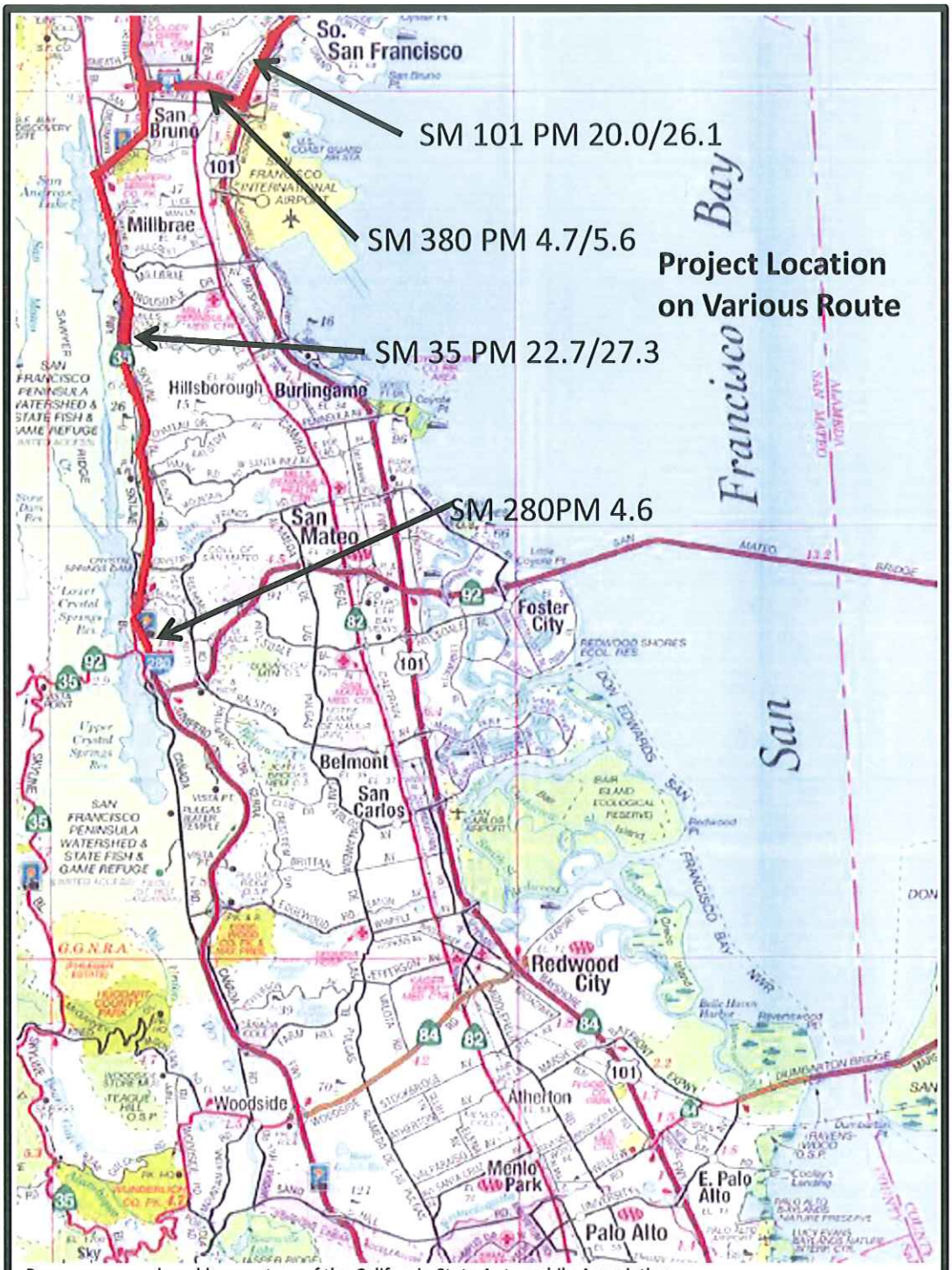
HQ Milestones	Delivery Date (Month, Day, Year)
PA & ED	9/30/2012
Regular Right of Way	9/30/2012
Project PS&E	9/30/2014
Right of Way Certification	9/30/2014
Ready to List	1/30/2015
Approve Contract	5/30/2015
Contract Acceptance	5/30/2016
End Project	2/30/2016

Key assumptions for the schedule:

- 120 working days
- No environmental schedule constraints

7. Attachments:

A. Project Location Map with Project Location List
B. Preliminary Cost Estimate



Base map reproduced by courtesy of the California State Automobile Association.

Project Location List

NO.	COUNTY	ROUTE	PM	LOCATION
1	SM	101	20.25-20.5	SB 101 between E/B 380 to S/B 101 collector ramp and the mainline
2	SM	101	20.75-20.8	SB 101 between the mainline and WB 380 collector offramp
3	SM	101	21.47	NB 101 South Airport Blvd the on and offramp
4	SM	280	4.6	On SM 280 in Woodside at Farm Hill Blvd UC
5	SM	35	27.3	In San Bruno at SM 35 OC King Drive
6	SM	35	22.7/23.1	On SM 35 at SM 280 Interchange
7	SM	380	4.7	EB 380 RAMP between SB 101
8	SM	380	4.82	WB 380 RAMP TO SB 280
9	SM	380	4.88	NB 280 RAMP TO EB 380
10	SM	380	4.96	WB 380 RAMP TO NB 280
11	SM	380	5.23	EB 380 RAMP TO RTE. 82
12	SM	380	5.28	EB 380 RAMP TO RTE. 82
13	SM	380	5.36	EB 380 RAMP TO RTE. 82
14	SM	380	5.49	NB RTE. 82 RAMP TO WB 380

On Route 101 in San Mateo County between PM 20.0 and PM 26.1
On Route 280 in San Mateo County PM 4.6
On Route 35 in San Mateo County PM 22.7/27.3
On Route 380 in San Mateo County between PM 4.7 and PM 5.6

Attachment A

PRELIMINARY COST ESTIMATE

Access Work		Yes/No	Quantity (unit)	Cost
(A)	Access Gates - Personnel			
(B)	Access Gates - Equipment	Yes	2	$12,500
(C)	Light Duty Access Trails			
	(a) All Weather Surface			
	(b) Graded Surface			
(D)	Shoulder Widening/Turnouts			
	(a) Paved Surface			
	(b) All Weather Surface			
	(c) Graded Surface			
(E)	Staircases			
(F)	Maintenance Vehicle Pullout	Yes	6	$216,000
	COSTS SUBTOTAL			$228,500

Vegetation Control Work	Yes/No	Quantity (unit)	Cost
(A) Vegetation control under Metal Beam Guard Rail			
(B) Vegetation control under Thrie Beam Barrier			
(C) Vegetation control around sign posts			
(D) Paving narrow areas			
(E) Paving areas beyond the gore			
Roadway Excavation	Yes	1800 (CY)	$360,000
Class 4 Aggregate Subbase	Yes	1800 (CY)	$63,000
Hot Mix Asphalt Concrete (Type A)	Yes	2200 (TON)	$220,000
COST SUBTOTALS			$643,000

Facility Relocation Work	Yes/No	Quantity (unit)	Cost
(A) Pull boxes			
(B) Irrigation valve boxes			

(C) Backflow preventer assemblies			
(D) Electrical control boxes			
(E) Traffic control boxes			
(F) Irrigation control boxes			
Modify Existing Irrigation Facilities	Yes	LS	$50,000
(G) State Utility Box Relocation	Yes	LS	$20,000
			$70,000

COST SUBTOTALS

Additional Work		Yes/No	Quantity (unit)	Cost
(A)	Traffic Control	Yes	LS	$100,000
(B)	Clearing and Grubbing	Yes	LS	$ 20,000
(C)	Other Landscape Related Work			
	Erosion Control	Yes	LS	$ 18,000
	Water Quality Control	Yes	LS	$ 20,000
(D)	Guardrail (include remove and replace)			
	(a) Metal Beam			
	(b) Concrete			
	(c) Bridge Approach			
(E)	Drainage Adjustment and Rehabilitation	Yes	LS	$100,000
(F)	Retaining Walls			

COST SUBTOTALS	$ 258,000
SUM OF SUBTOTALS	$1,199,500
25% Contingency	$ 299,900
TOTAL PROJECT COST	$1,499,400
Say	**$1,500,000**

Note: Key assumptions for the cost estimate:

- Roadway Excavation of ADL contaminated soil
- Proposed paved area structural section is assumed to be 1' Hot Mix Asphalt (HMA) and 1' Aggregate Sub-base (AS) Class 4 (typical roadway section)